Chapter 5
Applicable Laws, Regulations, and Other Requirements

Chapter 5 presents the laws, regulations, and other requirements that apply to the proposed action and alternatives. Federal, state, and U.S. Department of Energy environmental, safety, and health laws, regulations, and Executive and DOE orders are summarized in Section 5.1. Radioactive material packaging and transportation laws and regulations are discussed in Section 5.2. Emergency management and response laws, regulations, and Executive orders are discussed in Section 5.3. Consultations with Federal, state, and local agencies and federally recognized Native American groups are discussed in Section 5.4.

5.1 Environmental, Safety, and Health Laws, Regulations, Executive Orders, and U.S. Department of Energy Orders

There are a number of Federal environmental laws that affect environmental protection, compliance, or consultation at every U.S. Department of Energy (DOE) location and at commercial light water reactors (CLWRs). In addition, certain environmental requirements have been delegated to state authorities for enforcement and implementation. It is DOE policy to conduct its operations in a manner that ensures the protection of public health, safety, and the environment through compliance with all applicable Federal and state laws, regulations, orders, and other requirements.

The various action alternatives analyzed in this *Final Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility* (*Nuclear Infrastructure Programmatic Environmental Impact Statement* [NI PEIS]) involve the operation of existing DOE and commercial facilities, the construction and operation of new DOE facilities, and the transportation of materials. Compliance with statutes, regulations, and other Federal and state requirements may be dependent on whether a facility is newly built (preoperational) or has already been operating, as well as dependent on who owns the facility (i.e., DOE or a private entity). A brief summary of the alternatives is provided below to help the reader understand the statutory, regulatory, and other requirements that are discussed later in this chapter. Chapter 2 provides a more detailed discussion of these alternatives.

- **No Action Alternative** includes maintaining an existing facility (the Fast Flux Text Facility [FFTF]) in standby status and purchasing plutonium-238 from Russia. The continued use of existing DOE facilities to produce medical and industrial isotopes and conduct nuclear research and development activities at current operating levels is also included in this alternative, as well as the storage of neptunium-237.

- **Alternative 1** includes the use of existing DOE facilities to store nuclear materials (the Radiochemical Engineering Development Center [REDC], the Fluorinel Dissolution Process Facility [FDPF], the Fuels and Materials Examination Facility [FMEF], the Hanford Radiochemical Processing Laboratory [RPL/306–E], or the Idaho Nuclear Technology and Engineering Center [INTEC] Building 651 [CPP–651]); fabricate and process targets for plutonium-238 production, medical and industrial isotope production, and nuclear research and development needs (FMEF, REDC, Hanford RPL/306–E, FDPF); and irradiate all targets at FFTF.

- **Alternative 2** includes the use of existing operating DOE facilities to store nuclear materials (REDC, FDPF, CPP–651, or FMEF), fabricate and process neptunium-237 targets (REDC, FDPF, FMEF), and irradiate neptunium-237 targets (the Advanced Test Reactor [ATR], the High Flux Isotope Reactor [HFIR]). In addition to existing DOE facilities, the use of an existing operating CLWR to irradiate neptunium-237 targets was analyzed. The permanent deactivation of an existing DOE facility (FFTF) also is included in this alternative. Under this alternative, existing DOE facilities would

continue medical and industrial isotope production and nuclear research and development activities at current operating levels.

- **Alternative 3** includes the construction and operation of a new support facility at an existing DOE site to fabricate and process medical and industrial targets and nuclear materials for research and development purposes, and one or two new accelerators at an existing DOE site to irradiate these targets and materials, as well as neptunium-237 targets for plutonium-238 production. The use of existing DOE facilities for neptunium-237 target fabrication and processing (REDC, FDPF, FMEF) and materials storage (REDC, FDPF, CPP–651, FMEF) also was analyzed. The decontamination and decommissioning of the new accelerator(s) and support facility and the permanent deactivation of FFTF, an existing DOE facility, are included in this alternative.

- **Alternative 4** includes the construction and operation of a new support facility at an existing DOE site to fabricate and process medical and industrial targets and nuclear materials for research and development purposes, and a new research reactor at an existing DOE site to irradiate these targets and materials, as well as neptunium-237 targets for plutonium-238 production. Neptunium-237 target fabrication and processing at existing DOE facilities (REDC, FDPF, FMEF) and materials storage (REDC, FDPF, CPP–651, FMEF) were analyzed in this alternative as well. The decontamination and decommissioning of the new research reactor and support facility and the permanent deactivation of FFTF, an existing DOE facility, also are included in this alternative.

- **Alternative 5** includes the permanent deactivation of FFTF, an existing DOE facility, with no new missions at existing facilities.

The addition of plutonium-238 production, research and development, and industrial and medical isotope production missions at existing facilities would necessitate few, if any, physical or substantive changes to current activities at these sites. Continued compliance with applicable laws, regulations, and other requirements, including permits and licenses, would be required. Based on projections for air emissions and liquid effluent, no changes to the permits at these existing facilities should be necessary to accommodate the nuclear energy research and development and isotope production missions. Waste generated as a result of the expanded missions would be managed consistent with current site waste management practices and existing permits, agreements, and orders. However, as with any project, it should be noted that regulatory requirements can change over time and may impact current practices, possibly requiring changes or modifications to facility operations and applicable permits or licenses.

The construction and operation of one or two new accelerators or the research reactor and support facility at an existing DOE site would require major physical changes. These new facilities would require the appropriate licenses and permits necessary for construction and operation.

This section describes the environmental, safety, and health laws, regulations, and orders that may apply to the proposed action and alternatives. A more detailed analysis for new facilities (i.e., new accelerator(s) or new research reactor) would be needed if either of these alternatives is selected in the Record of Decision.

5.1.1 Federal Environmental, Safety, and Health Laws and Regulations

National Environmental Policy Act of 1969, as amended (42 United States Code (U.S.C.) 4321 *et seq.*)—The National Environmental Policy Act (NEPA) establishes a national policy promoting awareness of the environmental consequences of human activity on the environment and consideration of environmental impacts during the planning and decision-making stages of a project. It requires Federal

agencies to prepare a detailed environmental impact statement (EIS) for any major Federal action with potentially significant environmental impact.

This NI PEIS has been prepared in accordance with NEPA requirements, the Council on Environmental Quality regulations (40 Code of Federal Regulations (CFR) Part 1500 *et seq.*), and DOE (10 CFR Part 1021, DOE Order 451.1B) provisions for implementing the procedural requirements of NEPA. It discusses reasonable alternatives and their potential environmental consequences.

Atomic Energy Act of 1954 (42 U.S.C. 2011 *et seq.*)—The Atomic Energy Act authorizes DOE to establish standards to protect health or minimize dangers to life or property for activities under DOE's jurisdiction. Through a series of DOE orders, an extensive system of standards and requirements was established to ensure safe operation of DOE facilities. DOE regulations are found in 10 CFR.

The Atomic Energy Act also requires entities that operate nuclear power plants, such as CLWRs, to have a plant license issued by the U.S. Nuclear Regulatory Commission (NRC). The NRC regulations that implement this requirement provide for permits to be issued for the construction or alteration of such facilities. Operating licenses are applied for after completion of the construction or alteration of the facilities. Construction permits and operating licenses include detailed provisions regarding their duration and the design, safety, and quality assurance requirements for the subject facilities. The NRC regulations for permits and operating licenses are found in 10 CFR.

For alternatives involving existing DOE facilities and the construction and operation of one or two new DOE accelerators or a research reactor and support facility, an NRC license is not required and the facilities would need to comply with the appropriate DOE orders. A list of applicable DOE orders is provided in Section 5.1.3.

For the alternative involving the existing generic CLWR, the existing operating license would need to be amended to address neptunium-237 target irradiation. NRC must approve the generic CLWR's license amendment before this plant can irradiate these targets to produce plutonium-238.

For nuclear facilities in the United States, annual exposure limits to the public and radiation workers are established by NRC in 10 CFR Part 20 ("Standards for Protection Against Radiation") and 10 CFR Part 50, Appendix I ("Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluent").

Clean Air Act of 1970, as amended (42 U.S.C. 7401 *et seq.*)—The Clean Air Act is intended to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." Section 118 of the Clean Air Act (42 U.S.C. 7418) requires that each Federal agency with jurisdiction over any property or facility engaged in any activity that might result in the discharge of air pollutants comply with "all Federal, state, interstate, and local requirements" with regard to the control and abatement of air pollution.

The Clean Air Act: (1) requires the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards as necessary to protect the public health, with an adequate margin of safety, from any known or anticipated adverse effects of a regulated pollutant (42 U.S.C. 7409 *et seq.*); (2) requires establishment of national standards of performance for new or modified stationary sources of atmospheric pollutants (42 U.S.C. 7411); (3) requires specific emission increases to be evaluated so as to prevent a significant deterioration in air quality (42 U.S.C. 7470 *et seq.*); and (4) requires specific standards for releases of hazardous air pollutants (including radionuclides) (42 U.S.C. 7412). These standards are implemented

through state implementation plans developed by each state with EPA approval. The Clean Air Act requires sources to meet standards and obtain permits to satisfy these standards.

Emissions of air pollutants are regulated by EPA under 40 CFR Parts 50 through 99. Radionuclide emissions from DOE facilities are regulated under the National Emission Standards for Hazardous Air Pollutants Program under 40 CFR Part 61. Approval to construct a new facility or to modify an existing one may be required by these regulations under 40 CFR Section 61.07. These standards are not applicable to NRC-licensed facilities such as CLWRs. As cited in EPA's final rule (60 Federal Register 46206), compliance with the NRC regulations constitutes compliance with 40 CFR Part 61, Subparts H and I.

EPA also establishes radiation protection standards for members of the public from the general environment and from radioactive materials introduced into the general environment as a result of nuclear fuel cycle operations. These standards, which are applicable to CLWRs, are found in 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations."

For alternatives involving an existing DOE facility or an existing generic CLWR, no amendments to current air permits are expected, nor would approvals be needed to modify an existing facility, as required under 40 CFR Section 61.07. As discussed in the Air Resource sections of Chapter 4, the air quality standards are not expected to be exceeded.

For the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, air permits for construction and operation would need to be obtained.

Clean Water Act of 1972, as amended (33 U.S.C. 1251 *et seq.*)—The Clean Water Act, which amended the Federal Water Pollution Control Act, was enacted to "restore and maintain the chemical, physical, and biological integrity of the Nation's water." The Clean Water Act prohibits the "discharge of toxic pollutants in toxic amounts" to navigable waters of the United States. Section 313 of the Clean Water Act requires all branches of the Federal Government engaged in any activity that might result in a discharge or runoff of pollutants to surface waters to comply with Federal, state, interstate, and local requirements.

The Clean Water Act provides water quality standards for the Nation's waterways, guidelines and limitations for effluent discharges from point-source discharges, and the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES program is administered by EPA, pursuant to regulations in 40 CFR Part 122 *et seq*. Sections 401 through 405 of the Water Quality Act of 1987 added Section 402(p) to the Clean Water Act requiring that EPA establish regulations for permits for storm-water discharges associated with industrial activities. Storm-water provisions of the NPDES program are set forth at 40 CFR Section 122.26. Permit modifications are required if discharge effluent is altered.

For the alternatives involving an existing DOE facility or an existing generic CLWR, no amendments to NPDES permits are expected. As discussed in the Water Resource sections of Chapter 4, the water quality standards are not expected to be exceeded.

For the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, NPDES permits may be required.

Safe Drinking Water Act of 1974, as amended (42 U.S.C. 300(f) *et seq.*)—The primary objective of the Safe Drinking Water Act is to protect the quality of public drinking water supplies and sources of drinking water. The implementing regulations, administered by EPA unless delegated to states, establish standards applicable to public water systems. These regulations include maximum contaminant levels (including those for radioactivity) in public water systems, which are defined as water systems that have at least 15 service

connections used by year-round residents or regularly serve at least 25 year-round residents. The EPA regulations implementing the Safe Drinking Water Act are found under 40 CFR Parts 100 through 149. For radioactive material, the regulations specify that the average annual concentration of manmade radionuclides in drinking water, as delivered to the user by such a system, shall not produce a dose equivalent to the total body or an internal organ greater than 4 millirem per year beta activity (40 CFR Section 141.16(a)). Other programs established by the Safe Drinking Water Act include the Sole Source Aquifer Program, the Wellhead Protection Program, and the Underground Injection Control Program.

Activities conducted under all of the alternatives must be in compliance with the standards specified under the Safe Drinking Water Act, particularly the standard for radionuclides. As discussed in the Water Resources sections of Chapter 4, these standards are not expected to be exceeded.

Low-Level Radioactive Waste Policy Act of 1980, as amended (42 U.S.C. 2021 *et seq.*)—This act amended the Atomic Energy Act to specify that the Federal Government is responsible for disposal of low-level radioactive waste generated by its activities, and states are responsible for disposal of other low-level radioactive waste. It provides for and encourages interstate compacts to carry out the state responsibilities.

Low-level radioactive waste is expected to be generated from activities conducted under all of the alternatives. Therefore, this waste must be managed in compliance with this act. The Waste Management sections of Chapter 4 provide information on the generation and management of low-level radioactive waste for each of the alternatives.

Solid Waste Disposal Act of 1965, as amended by the Resource Conservation and Recovery Act of 1976 and the Hazardous and Solid Waste Amendments of 1984 (42 U.S.C. 6901 *et seq.*)—The Solid Waste Disposal Act of 1965, as amended, governs the transportation, treatment, storage, and disposal of hazardous and nonhazardous waste. Under the Resource Conservation and Recovery Act of 1976 (RCRA), which amended the Solid Waste Disposal Act of 1965, EPA defines and identifies hazardous waste; establishes standards for its transportation, treatment, storage, and disposal; and requires permits for persons engaged in hazardous waste activities. Section 3006 of the act (42 U.S.C. 6926) allows states to establish and administer these permit programs with EPA approval. The EPA regulations implementing RCRA are found in 40 CFR Parts 260 through 283.

Regulations imposed on a generator or on a treatment, storage, and/or disposal facility vary according to the type and quantity of material or waste generated, treated, stored, and/or disposed. The method of treatment, storage, and/or disposal also impacts the extent and complexity of the requirements.

Hazardous and mixed waste is expected to be generated from activities conducted for all of the alternatives. Therefore, these waste types must be managed in compliance with this act. The Waste Management sections of Chapter 4 provide information on the generation and management of hazardous and mixed waste for each of the alternatives.

Federal Facility Compliance Act of 1992 (42 U.S.C. 6961 *et seq.*)—The Federal Facility Compliance Act, enacted on October 6, 1992, amended RCRA. Section 102(a)(3) of the Federal Facility Compliance Act waives sovereign immunity for Federal facilities from fines and penalties for violations of RCRA, state, interstate, and local hazardous and solid waste management requirements. This waiver was delayed for 3 years following enactment for violations of the land disposal restrictions storage and prohibition (RCRA Section 3004(j)) involving mixed waste at DOE facilities. The act further delays the waiver of sovereign immunity beyond the 3-year period at a facility if DOE is in compliance with an approved plan for developing treatment capacity and technologies for mixed waste generated or stored at the facility, as well as an order requiring compliance with the plan.

Mixed low-level radioactive waste is expected to be generated from activities conducted for all of the alternatives. Therefore, this waste must be managed in compliance with this act. The Waste Management sections of Chapter 4 provide more information on the generation and management of mixed waste for each of the alternatives.

Nuclear Waste Policy Act of 1982 as amended (U.S.C. 10101 through 10271)—The Nuclear Waste Policy Act provides for research, development, and demonstration activities regarding disposal of high-level radioactive waste and spent nuclear fuel. As originally enacted, the Nuclear Waste Policy Act called for the Secretary of Energy to recommend candidate repository sites, but in 1987 it was amended to require DOE to proceed only with characterization of the Yucca Mountain Site (42 U.S.C. 10133 and 10172). The Nuclear Waste Policy Act also established the Office of Civilian Radioactive Waste Management (42 U.S.C. 10224), the Office of Nuclear Waste Negotiator (42 U.S.C. 10242), and the Nuclear Waste Fund (42 U.S.C. 10222); and it provides authority (along with the Atomic Energy Act) for EPA to develop standards for protection of the general environment from the management and disposal of spent nuclear fuel, transuranic, and high-level radioactive waste (40 CFR Part 191).

As discussed in Chapter 4, Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13, DOE is considering whether the waste from processing irradiated neptunium-237 targets should be classified as high-level radioactive waste. If this waste were to be classified as high-level radioactive waste, then this act would be applicable. In addition, the spent nuclear fuel expected to be generated under the alternatives to restart or deactivate FFTF, as discussed in Sections 4.3.1.1.14 and 4.4.1.2.14, must be managed in compliance with this act.

Pollution Prevention Act of 1990 (42 U.S.C. 13101 *et seq.*)—The Pollution Prevention Act establishes a national policy for waste management and pollution control. Source reduction is given first preference, followed by environmentally safe recycling, with disposal or releases to the environment as a last resort. In response to the policies established by the act, DOE committed to participation in the Superfund Amendments and Reauthorization Act, Section 313, EPA 33/50 Pollution Prevention Program. The goal for facilities involved in compliance with Section 313 is to achieve a 33 percent reduction (from a 1993 baseline) in the release of 17 priority chemicals by 1997. On August 3, 1993, President Clinton issued Executive Order 12856 requiring DOE to achieve a 50 percent reduction in total releases of all toxic chemicals by December 31, 1999. On November 12, 1999, U.S. Secretary of Energy Bill Richardson issued 14 pollution prevention and energy efficiency goals for DOE. These goals are designed to build environmental accountability and stewardship into DOE's decision-making process. Under these goals, DOE will strive to minimize waste and maximize energy efficiency as measured by continuous cost-effective improvements in the use of materials and energy, with the years 2005 and 2010 as interim measurement points.

Radioactive, hazardous, and nonhazardous waste types are expected to be generated from all the alternatives; therefore, efforts must be made to minimize their generation. The Waste Management sections of Chapter 4 provide more information on the generation and management of these wastes.

Toxic Substances Control Act of 1976 (15 U.S.C. 2601 *et seq.*)—The Toxic Substances Control Act provides EPA with the authority to require testing of chemical substances entering the environment and to regulate them as necessary. The law complements and expands existing toxic substance laws, such as Section 112 of the Clean Air Act and Section 307 of the Clean Water Act. The Toxic Substances Control Act requires compliance with inventory reporting and chemical control provisions of the act to protect the public from the risks of exposure to chemicals. The act also imposes strict limitations on the use and disposal of polychlorinated biphenyls, chlorofluorocarbons, asbestos, dioxins, certain metal-working fluids, and hexavalent chromium.

Activities under all of the alternatives would need to be in compliance with this act.

National Historic Preservation Act of 1996, as amended (16 U.S.C. 470 *et seq.*)—The National Historic Preservation Act provides that sites with significant national historic value be placed on the *National Register of Historic Places*, which is maintained by the Secretary of the Interior. The major provisions of the act for DOE are Sections 106 and 110. Both sections aim to ensure that historic properties are appropriately considered in planning Federal initiatives and actions. Section 106 is a specific, issue-related mandate to which Federal agencies must adhere. It is a reactive mechanism that is driven by a Federal action. Section 110, in contrast, sets out broad Federal agency responsibilities with respect to historic properties. It is a proactive mechanism with emphasis on ongoing management of historic preservation sites and activities at Federal facilities. No permits or certifications are required under the act.

Section 106 requires the head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking to ensure compliance with the provisions of the act. It compels Federal agencies to "take into account" the effect of their projects on historical and archaeological resources and to give the Advisory Council on Historic Preservation the opportunity to comment on such effects. Section 106 mandates consultation during Federal actions if the undertaking has the potential to have an effect on a historic property. This consultation normally involves the State and/or Tribal Historic Preservation Officers and may include other organizations and individuals, such as local governments, Native American tribes, and Native Hawaiian organizations. If an adverse effect is found, the consultation often ends with the execution of a memorandum of agreement that states how the adverse effects will be resolved.

The regulations implementing Section 106, found in 30 CFR Part 800, were revised on May 18, 1999 (64 FR 27043), effective June 17, 1999. This revision introduced new flexibility and options for agencies to use to meet their obligations to comply with the act.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, no historic property resources would be impacted. Two FFTF structures (the Reactor Containment Building and FFTF Control Building) at Hanford have been determined to be eligible for the National Register of Historic Places as contributing properties within the Historic District recommended for mitigation; however, as discussed in Section 4.3.1.1.7, the restart of FFTF would be consistent with the purpose for which the reactor was built and would not affect the status of the aforementioned structures. In addition, the Materials Test Reactor, the Engineering Test Reactor, and ATR, as well as a number of support facilities at the Idaho National Engineering and Environmental Laboratory (INEEL), are potentially eligible for nomination to the National Register. However, as discussed in Section 4.4.1.1.7, the use of ATR would not affect the potential eligibility of these structures for listing.

For the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, additional information would be required to determine if there are any historic resources, including those that are eligible for listing on the National Register of Historic Places. These resources would be identified through site surveys and consultations with the State Historic Preservation Officer.

American Antiquities Act of 1906, as amended (16 U.S.C 431 to 433)—This act protects historic and prehistoric ruins, monuments, and antiquities, including paleontological resources, on federally controlled lands from appropriation, excavation, injury, and destruction without permission. On June 9, 2000, the Hanford Reach was designated as a national monument under this act.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, no historic or prehistoric property resources would be impacted.

For the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, additional information would be required to determine whether there are any historic or prehistoric resources and the potential impacts.

Archaeological and Historic Preservation Act of 1974, as amended (16 U.S.C 469 to 469c)—This act protects sites that have historic and prehistoric importance.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, no historic or prehistoric property resources would be impacted.

For the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, additional information would be required to determine whether there are any historic or prehistoric resources and the potential impacts.

Archaeological and Resources Protection Act of 1979, as amended (16 U.S.C. 470 *et seq.*)—This act requires a permit for any excavation or removal of archaeological resources from Federal or Native American lands. Excavations must be undertaken for the purpose of furthering archaeological knowledge in the public interest, and resources removed are to remain the property of the United States. The law requires that whenever any Federal agency finds that its activities may cause irreparable loss or destruction of significant scientific, prehistoric, or archaeological data, the agency must notify the U.S. Department of the Interior and may request that the Department undertake the recovery, protection, and preservation of such data. Consent must be obtained from the Native American tribe or the Federal agency having authority over the land on which a resource is located before issuance of a permit; the permit must contain terms and conditions requested by the tribe or Federal agency.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the new 76-meter (250-foot) stack at FMEF, or land disturbance is expected, a permit would not be required.

However, for alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether a permit would be required.

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)—The Endangered Species Act is intended to prevent the further decline of endangered and threatened species and to restore these species and habitats. Section 7 of the act requires Federal agencies having reason to believe that a prospective action may affect an endangered or threatened species or its habitat to consult with the U.S. Fish and Wildlife Service of the U.S. Department of the Interior or the National Marine Fisheries Service of the U.S. Department of Commerce to ensure that the action does not jeopardize the species or destroy its habitat (50 CFR Part 17). If, despite reasonable and prudent measures to avoid or minimize such impacts, the species or its habitat would be jeopardized by the action, a review process is specified to determine whether the action may proceed.

As discussed in the Ecological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new

construction, except for the new 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to threatened and endangered species are not expected.

However, for alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether threatened or endangered species would be impacted.

Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 *et seq.*)—The Migratory Bird Treaty Act, as amended, is intended to protect birds that have common migration patterns between the United States and Canada, Mexico, Japan, and Russia. It regulates the harvest of migratory birds by specifying conditions such as the mode of harvest, hunting seasons, and bag limits. The act stipulates that it is unlawful at any time, by any means, or in any manner, to "kill ... any migratory bird." Although no permit for this project is required under the act, DOE is required to consult with the U.S. Fish and Wildlife Service regarding impacts to migratory birds, and to avoid or minimize these effects in accordance with the U.S. Fish and Wildlife Service Mitigation Policy.

As discussed in the Ecological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the new 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to migratory birds are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether migratory birds would be impacted.

Bald and Golden Eagle Protection Act of 1973, as amended (16 U.S.C. 668 through 668d)—The Bald and Golden Eagle Protection Act, as amended, makes it unlawful to take, pursue, molest, or disturb bald (American) and golden eagles, their nests, or their eggs anywhere in the United States (Section 668, 668c). A permit must be obtained from the U.S. Department of the Interior to relocate a nest that interferes with resource development or recovery operations.

As discussed in the Ecological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the new 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to migratory birds are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether bald or golden eagles would be impacted and whether a permit would be required.

Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*)—The Fish and Wildlife Coordination Act promotes more effectual planning and cooperation between Federal, state, public, and private agencies for the conservation and rehabilitation of the Nation's fish and wildlife and authorizes the U.S. Department of the Interior to provide assistance. This act requires consultation with the U.S. Fish and Wildlife Service on the possible effects on wildlife if there is construction, modification, or control of bodies of water in excess of 10 acres in surface area.

As discussed in the Ecological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new

construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to the Nation's fish and wildlife are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether there would be any impacts to the Nation's fish and wildlife.

Wild and Scenic Rivers Act of 1968, as amended (16 U.S.C. 1271 *et seq.*)—This act requires consultation before construction of any new Federal project associated with a river designated as wild and scenic or under study to minimize and mitigate any adverse effects on the physical and biological properties of the river.

As discussed in Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to any rivers designated as wild and scenic or under study are not expected. In addition, impacts on visual resources as a result of constructing a new stack at FMEF are expected to be minimal.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether there would be any impacts to rivers designated as wild and scenic or under study.

Farmland Protection Act of 1981 (7 U.S.C. 4201 *et seq.*)—This act requires the avoidance of any adverse effects on prime and unique farmlands.

As discussed in Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to any prime and unique farmlands are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information would be needed to determine whether there would be any impacts to prime or unique farmlands.

American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996)—This act reaffirms Native American religious freedom under the First Amendment, and sets U.S. policy to protect and preserve the inherent and constitutional right of Native Americans to believe, express, and exercise their traditional religions. The act requires that Federal actions avoid interfering with access to sacred locations and traditional resources that are integral to the practice of religions.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to Native American resources are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information about the presence, type, and location of Native American resources would be needed to determine whether there would be any impacts to these resources.

Religious Freedom Restoration Act of 1993 (42 U.S.C. 2000(bb) *et seq.*)—This act prohibits the U.S. Government, including Federal departments, from substantially burdening the exercise of religion unless the Government demonstrates a compelling governmental interest, the action furthers a compelling government interest, and it is the least restrictive means of furthering that interest.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, impacts to Native American resources are not expected.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information about the presence, type, and location of Native American resources would be needed to determine whether there would be any impacts to these resources.

Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001)—This act established a means for Native Americans to request the return or "repatriation" of human remains and other cultural items presently held by Federal agencies or federally assisted museums or institutions. The act also contains provisions regarding the intentional excavation and removal of, inadvertent discovery of, and illegal trafficking in Native American human remains and cultural items. Major actions under this law include: (a) establishing a review committee with monitoring and policy-making responsibilities, (b) developing regulations for repatriation, including procedures for identifying lineal descent or cultural affiliation needed for claims, (c) providing oversight of museum programs designed to meet the inventory requirements and deadlines of this law, and (d) developing procedures to handle unexpected discoveries of graves or grave goods during activities on Federal or tribal lands. All Federal agencies that manage land and/or are responsible for archaeological collections from their lands or generated by their activities must comply with the act. DOE managers of ground-disturbing activities on Federal and tribal lands should make themselves aware of the statutory provisions treating inadvertent discoveries of Native American remains and cultural objects. Regulations implementing the act are found at 43 CFR Part 10.

As discussed in the Cultural and Paleontological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities and the existing generic CLWR, due to the developed nature of these areas and the fact that no new construction, except for the 76-meter (250-foot) stack at FMEF, or land disturbance is expected, it is unlikely that human remains or other cultural items would be uncovered.

However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, disturbance of land would occur and, therefore, additional information about the presence, type, and location of Native American resources would be needed to determine whether there would be any impacts to these resources.

Occupational Safety and Health Act of 1970 (29 U.S.C. 651 *et seq.*)—The Occupational Safety and Health Act establishes standards for safe and healthful working conditions in places of employment throughout the United States. The act is administered and enforced by the Occupational Safety and Health Administration (OSHA), a U.S. Department of Labor agency. Although OSHA and EPA both have a mandate to reduce exposures to toxic substances, OSHA's jurisdiction is limited to safety and health conditions that exist in the workplace environment.

Under the act, it is the duty of each employer to furnish employees a place of employment free of recognized hazards likely to cause death or serious physical harm. Employees have a duty to comply with the occupational safety and health standards and rules, regulations, and orders issued under the act. OSHA regulations

(29 CFR Part 1910) establish specific standards telling employers what must be done to achieve a safe and healthful working environment. Government agencies, including DOE, are not technically subject to OSHA regulations, but are required under 29 U.S.C. 668 to establish their own occupational safety and health programs for their places of employment which are consistent with OSHA standards. DOE places emphasis on compliance with these regulations at its facilities, and prescribes, through DOE orders, the Occupational Safety and Health Act standards that contractors shall meet, as applicable to their work at government-owned, contractor-operated facilities (DOE Order 440.1A). DOE keeps and makes available the various records of minor illnesses, injuries, and work-related deaths as required by OSHA regulations.

Activities under all the alternatives would need to be conducted in compliance with this act.

Noise Control Act of 1972, as amended (42 U.S.C. 4901 *et seq.*)—Section 4 of the Noise Control Act of 1972, as amended, directs all Federal agencies to carry out "to the fullest extent within their authority" programs within their jurisdictions in a manner that furthers a national policy of promoting an environment free from noise jeopardizing health and welfare.

As discussed in the Noise sections of Chapter 4, the operation of existing DOE facilities and existing CLWR would not result in any impacts because of increased noise levels. The construction and operation of new DOE facilities would require compliance with this requirement.

5.1.2 Environmental, Safety, and Health Executive Orders

Executive Order 11514 (Protection and Enhancement of Environmental Quality)—This order (regulated by 40 CFR Parts 1500 through 1508) requires Federal agencies to continually monitor and control their activities to: (1) protect and enhance the quality of the environment, and (2) develop procedures to ensure the fullest practicable provision of timely public information and understanding of the Federal plans and programs that may have potential environmental impact so that views of interested parties can be obtained. DOE has issued regulations (10 CFR Part 1021) and DOE Order 451.1B for compliance with this Executive order.

As previously discussed under Section 5.1.1, this NI PEIS has been prepared in accordance with NEPA requirements (i.e., 40 CFR Parts 1500 through 1508, 10 CFR Part 1021, and DOE Order 451.1B).

Executive Order 11593 (National Historic Preservation, May 13, 1971)—This order directs Federal agencies to locate, inventory, and nominate properties under their jurisdiction or control to the *National Register of Historic Places*, if those properties qualify. This process requires DOE to provide the Advisory Council on Historic Preservation the opportunity to comment on the possible impacts of the proposed activity on any potential eligible or listed resources. Compliance with this Executive order is discussed in Section 5.1.1, National Historic Preservation Act of 1996, as amended.

Executive Order 11988 (Floodplain Management)—This order (regulated by 10 CFR Part 1022) requires Federal agencies to establish procedures to ensure that the potential effects of flood hazards and floodplain management are considered for any action undertaken in a floodplain, and that floodplain impacts be avoided to the extent practicable. As discussed in the Water Resource sections of Chapter 3, for the alternatives involving existing DOE facilities and the existing generic CLWR, compliance with this order has already been met. However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, additional information would be needed to determine compliance with this order.

Executive Order 11990 (Protection of Wetlands)—This order (regulated by 10 CFR Part 1022) requires Federal agencies to avoid any short- or long-term adverse impacts on wetlands wherever there is a practicable

alternative. As discussed in the Ecological Resource sections of Chapter 4, for the alternatives involving existing DOE facilities, impacts to wetlands are not expected because either there are no wetlands in the vicinity of the facility or because water usage and water discharge would not change or would be small fractions of current values, and discharge chemistry would not be expected to change. However, for the alternatives involving the construction and operation of one or two new DOE accelerators or a research reactor and support facility, additional information would be needed to determine whether there would be impacts to wetlands.

Executive Order 12088 (Federal Compliance with Pollution Control Standards, October 13, 1978, as amended by Executive Order 12580, Federal Compliance with Pollution Control Standards, January 23, 1987)—This order directs Federal agencies to comply with applicable administrative and procedural pollution control standards established by, but not limited to, the Clean Air Act, the Noise Control Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act, and RCRA.

Activities under all of the alternatives involving DOE facilities would need to be in compliance with this order.

Executive Order 12580 (Superfund Implementation)—This order delegates to the heads of executive departments and agencies the responsibility of undertaking remedial actions for releases or threatened releases that are not on the National Priorities List, and removal actions, other than emergencies, where the release is from any facility under the jurisdiction or control of executive departments and agencies.

Activities under all of the alternatives involving DOE facilities would need to be in compliance with this order.

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)—This order requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. The Environmental Justice sections of Chapter 4 provide information on the compliance with this order.

Executive Order 12902 (Energy Efficiency and Water Conservation at Federal Facilities)—This order requires Federal agencies to develop and implement a program for conservation of energy and water resources.

Activities under all of the alternatives involving DOE facilities would need to be in compliance with this order.

Executive Order 13101 (Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition)—This order requires each Federal agency to incorporate waste prevention and recycling in its daily operations and work to increase and expand markets for recovered materials. This order states that it is national policy to prefer pollution prevention, whenever feasible. Pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort.

Activities under all of the alternatives involving DOE facilities would need to be in compliance with this order.

Executive Order 13112 (Invasive Species)—This order requires Federal agencies to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

Activities under all of the alternatives involving DOE facilities would need to be in compliance with this order.

Executive Order 13148 (Greening the Government Through Leadership in Environmental Management—This order sets new goals for pollution prevention, requires all Federal facilities to have an environmental management system, and requires compliance or environmental management system audits.

Activities under all alternatives involving DOE facilities would need to be in compliance with this order.

5.1.3 DOE Environmental, Safety, and Health Regulations and Orders

The Atomic Energy Act authorizes DOE to establish standards to protect health or minimize dangers to life or property from activities under DOE's jurisdiction. Through a series of DOE orders and regulations, an extensive system of standards and requirements has been established to ensure safe operation of DOE facilities. DOE regulations and orders do not apply to activities regulated by NRC (10 CFR Sections 830.2(a) and 835.1(b)). Thus, DOE regulations and orders would not apply to CLWR facilities.

DOE regulations are found in 10 CFR. These regulations address such areas as energy conservation, administrative requirements and procedures, nuclear safety, and classified information. For the purpose of this NI PEIS, relevant regulations include: "Procedural Rules for DOE Nuclear Activities" (10 CFR Part 820), "Nuclear Safety Management" (10 CFR Part 830), "Occupational Radiation Protection" (10 CFR Part 835), "Compliance with the National Environmental Policy Act" (10 CFR Part 1021), and "Compliance with Floodplains/Wetlands Environmental Review Requirements" (10 CFR Part 1022).

DOE orders are issued in support of environmental, safety, and health programs. Many DOE orders have been revised and reorganized to reduce duplication and to eliminate obsolete provisions. The new DOE order organization is by series, with each number identified by three digits, and is intended to include all DOE orders, policies, manuals, requirement documents, notices, and guides. The remaining DOE orders, which are identified by four digits, are expected to be revised and converted to the new DOE numbering system. The major DOE orders pertaining to the alternatives are listed in **Table 5–1**.

Table 5–1 Relevant DOE Orders (as of October 26, 2000)

DOE Order	Subject
Leadership/Management Planning	
O 151.1	Comprehensive Emergency Management System (09/25/95; Change 2, 08/21/96)
Information and Analysis	
O 231.1	Environment, Safety and Health Reporting (09/30/95; Change 2, 11/07/96)
O 232.1A	Occurrence Reporting and Processing of Operations Information (07/21/97)
Work Processes	
O 414.1A	Quality Assurance (09/29/99)
O 420.1	Facility Safety (10/13/95; Change 2, 10/24/96)
O 430.1A	Life Cycle Asset Management (10/14/98)
O 435.1	Radioactive Waste Management (07/09/99)
O 440.1A	Worker Protection Management for DOE Federal and Contractor Employees (03/27/98)
O 451.1B	National Environmental Policy Act Compliance Program (10/26/00)
O 460.1A	Packaging and Transportation Safety (10/02/96)
O 460.2	Departmental Materials Transportation and Packaging Management (09/27/95; Change 1, 10/26/95)
O 470.1	Safeguards and Security Program (09/28/95; Change 1, 06/21/96)
O 470.2A	Oversight and Performance Assurance Program (03/01/00)
O 473.2	Protective Force Program (06/30/00)
O 474.1	Control and Accountability of Nuclear Materials (08/11/99)
External Relationships	
1230.2	American Indian Tribal Government Policy (04/08/92)
Personnel Relations and Services	
3790.1B	Federal Employee Occupational Safety and Health Program (01/07/93)
Real Property Management	
4330.4B	Maintenance Management Program (02/10/94)
Project Management	
4700.1	Project Management System (03/06/87; Change 1, 06/02/92)
Environmental Quality and Impact	
5400.1	General Environmental Protection Program (11/09/88; Change 1, 06/29/90)
5400.5	Radiation Protection of the Public and the Environment (02/08/90; Change 2, 01/07/93)
5480.4	Environmental Protection, Safety, and Health Protection Standards (05/15/84; Change 4, 01/07/93)
5480.19	Conduct of Operations Requirements for DOE Facilities (07/09/90; Change 1, 05/18/92)
5480.20A	Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities (11/15/94)
5480.21	Unreviewed Safety Questions (12/24/91)
5480.22	Technical Safety Requirements (02/25/92; Change 2, 01/23/96)
5480.23	Nuclear Safety Analysis Reports (04/10/92; Change 1, 03/10/94)
5480.30	Nuclear Reactor Safety Design Criteria (01/19/93)
Emergency Preparedness	
5530.3	Radiological Assistance Program (01/14/92; Change 1, 04/10/92)
5530.5	Federal Radiological Monitoring and Assessment Center (07/10/92; Change 1, 12/02/92)
Defense Programs	
5610.14	Transportation Safeguards System Program Operations (05/12/93)
5632.1C	Protection and Control of Safeguards and Security Interests (07/15/94)
5660.1B	Management of Nuclear Materials (05/26/94)
Design	
6430.1A	General Design Criteria (04/06/89)

5.1.4 State Environmental Laws, Regulations, and Agreements

Certain environmental requirements, including many discussed in Section 5.1.1, have been delegated to state authorities for implementation and enforcement. It is DOE policy to conduct its operations in an environmentally safe manner, in compliance with all applicable laws, regulations, and standards, including state laws and regulations. A list of applicable state laws, regulations, and agreements is provided in **Table 5–2**. This list is not exhaustive and other state laws and regulations may be applicable. In addition, other state laws and regulations may be applicable for the CLWR and the construction and operation of new accelerator(s) or a research reactor and support facilities, but are not specifically identified in Table 5–2 because the specific locations of these facilities have not been determined.

Table 5–2 State Environmental Laws, Regulations, and Agreements

Law/Regulation/Agreement	Citation	Requirements
HANFORD, WASHINGTON		
Washington Clean Air Act	Revised Code of Washington (RCW), Chapter 70.94	Provides for development of air pollution control and permitting regulations.
Washington State Air Pollution Control Regulations	Washington Administrative Code (WAC), Chapters 173-400 through 173-495	Requires permitting of source and control of toxic air pollutants, radionuclides, and other pollutants.
Water Pollution Control Act of 1945	RCW, Chapter 90.48	Establishes a permit system to license and control the discharge of pollutants into waters of the state. Permits are required for both point-source and non-point-source discharges.
Surface Water Quality Standards	WAC, Chapter 173-201A	Establishes water quality standards for surface waters at levels protective of aquatic life.
Washington State Department of Health Radiation Protection Requirements	WAC, Chapter 246-247	Establishes requirements for all facilities with the potential to emit airborne radioactivity, including Federal facilities.
Hazardous Waste Management Act	RCW, Chapter 70.105	Requires permits for various activities involving hazardous waste.
Radioactive Waste Storage and Transport Act of 1980	RCW, Chapter 70.99	Establishes various requirements for handling, storage, and transportation of radioactive waste.
Dangerous Waste Regulations	WAC, Chapter 173-303	Establishes hazardous waste treatment, storage, and disposal standards and permit requirements. These requirements cover a larger universe of materials than the Federal hazardous waste program.
Department of Fish and Wildlife	WAC, Chapter 232-12	Defines the requirements that the Department of Game must take to protect endangered or threatened wildlife.

Law/Regulation/Agreement	Citation	Requirements
Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)	May 15, 1989 (amended December 31, 1998)	An enforceable agreement, which details work necessary to comply with state and Federal hazardous waste management requirements and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This is an agreement among DOE, EPA, and the Washington State Department of Ecology.
IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY, IDAHO		
Idaho Environmental Protection and Health Act	ID Code, Title 39, Chapter 1	Provides for development of air pollution control permitting regulations.
Rules for the Control of Air Pollution in Idaho	Idaho Administrative Procedure Act (IDAPA) 58, Title 1, Chapter 1	Requires permitting of sources and control of toxic air pollutants and other pollutants.
Idaho Water Pollution Control Act	ID Code, Title 39, Chapter 36	Establishes a program to enhance and preserve the quality and the value of water resources.
Idaho Hazardous Waste Management Act	ID Code, Title 39, Chapter 44	Requires permit prior to construction or modification of a hazardous waste disposal facility.
Rules and Standards for Hazardous Waste	IDAPA 58, Title 1, Chapter 5 (58.01.03)	Requires permit prior to construction or modification of a hazardous waste disposal facility.
Various Acts Regarding Fish and Game	ID Code, Title 36, Chapters 9, 11, and 24	Requires consultation with responsible agency.
Idaho Historic Preservation Act	ID Code, Title 67, Chapter 46	Requires consultation with responsible local governing body.
Spent Fuel Settlement Agreement (also known as the Governor's Agreement)	October 16, 1995	Allows INEEL to receive spent nuclear fuel and mixed waste from off site and establishes schedules for the treatment of existing high-level radioactive waste, transuranic waste, mixed waste, and removal of spent nuclear fuel from the state. (This agreement is not applicable to the alternatives because only new waste will be generated by the proposed action. This newly generated waste, if determined to be mixed waste, will be covered by the INEEL Site Treatment Plan.)
Consent Order for Federal Facility Compliance Plan	November 1, 1995	Addresses compliance with the Federal Facility Compliance Act and mixed waste treatment issues by implementing the INEEL Site Treatment Plan.

Law/Regulation/Agreement	Citation	Requirements
OAK RIDGE NATIONAL LABORATORY, TENNESSEE		
Tennessee Air Pollution Control Act	TN Code, Title 68, Chapter 201 (Part 1)	Provides for permitting to construct, modify, or operate an air contaminant source.
Tennessee Air Pollution Control Regulations	TN Rule, Chapter 1200-3	Requires a permit to construct, modify, or operate an air contaminant source. Also sets fugitive dust requirements.
Tennessee Water Quality Control Act	TN Code, Title 69, Chapter 3	Provides authority to issue new or modify existing NPDES permits required for a water discharge source.
Tennessee Water Pollution Control Regulations	TN Rule, Chapter 1200-4	Requires a new or modification of an existing NPDES permit for a water discharge source.
Tennessee Hazardous Waste Management Act	TN Code, Title 68, Chapter 212 (Part 1)	Requires permit for any construction or modification of a hazardous waste facility.
Tennessee State Executive Order on Wetlands	TN State Wetlands Conservation Strategy	Provides guidance from the Governor's Interagency Wetlands Committee.
Tennessee Nongame and Endangered or Threatened Wildlife Species Conservation Act of 1974	TN Code, Title 70, Chapter 8 (Part 1)	Requires consultation with responsible agency.
Tennessee Department of Environmental Conservation Order	October 1, 1995	Requires DOE to comply with the Site Treatment Plan for the management and treatment of mixed radioactive waste.

5.2 RADIOACTIVE MATERIAL PACKAGING AND TRANSPORTATION REGULATIONS

Transportation of hazardous and radioactive materials and substances is governed by the U.S. Department of Transportation (DOT) and NRC. The Hazardous Material Transportation Act of 1975 (49 U.S.C. 5105 *et seq.*) requires DOT to prescribe uniform national regulations for transportation of hazardous materials (including radioactive materials). Most state and local regulations regarding such transportation that are not substantively the same as DOT regulations are preempted (i.e., rendered void) (49 U.S.C. 5125). This, in effect, allows state and local governments only to enforce the Federal regulations, not to change or expand upon them.

This program is administered by the Research and Special Programs Administration of DOT, which coordinates its regulations with those of NRC (under the Atomic Energy Act) and with EPA (under RCRA) when covering the same activities.

DOT regulations, which may be found under 49 CFR Parts 171 through 178, and 49 CFR Parts 383 through 397, contain requirements for identifying a material as hazardous or radioactive. These regulations interface with the NRC regulations for identifying material, but DOT hazardous material regulations govern the hazard communication (such as marking, hazard labeling, vehicle placarding, and emergency response telephone number) and shipping requirements.

The NRC regulations applicable to radioactive materials transportation may be found under 10 CFR Part 71. These regulations include detailed packaging design requirements and package certification testing requirements. Complete documentation of design and safety analysis, and the results of the required testing, are submitted to NRC to certify the package for use. This certification testing involves the following components: heat, physical drop onto an unyielding surface, water submersion, puncture by dropping the package onto a steel bar, and gas tightness.

Transportation casks, which are used to transport radioactive material, are subject to numerous inspections and tests (10 CFR Section 71.87). These tests are designed to ensure that cask components are properly assembled and meet applicable safety requirements. Tests and inspections are clearly identified in the Safety Analysis Report for Packaging and/or the Certificate of Compliance for each cask. Casks are loaded and inspected by registered users in compliance with approved quality assurance programs. Operations involving the casks are conducted in compliance with 10 CFR Section 71.91. Reports of defects or accidental mishandling are submitted to NRC.

5.3 Emergency Management and Response Laws, Regulations, and Executive Orders

This section discusses the laws, regulations, and Executive orders that address the protection of public health and worker safety and require the establishment of emergency plans. These laws, regulations, and Executive orders relate to the operation of facilities, including DOE facilities and CLWRs that engage directly or indirectly in the production of special nuclear material.

5.3.1 Emergency Management and Response Federal Laws

Emergency Planning and Community Right-to-Know Act of 1986 (U.S.C. 11001 *et seq.*) (also known as "SARA Title III")—This act requires emergency planning, and notice to communities and government agencies, of the presence and release of specific chemicals. EPA implements this act under regulations found in 40 CFR Parts 355, 370, and 372. Under Subtitle A of this act, Federal facilities are required to provide various information (such as inventories of specific chemicals used or stored and releases that occur from these sites) to the state emergency response commission and to the local emergency planning committee to ensure that emergency plans are sufficient to respond to unplanned releases of hazardous substances. Implementation of the provisions of this act began voluntarily in 1987, and inventory and annual emissions reporting began in 1988. DOE requires compliance with Title III as a matter of DOE policy at its contractor-operated facilities.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9604(I) (also know as "Superfund")—This act provides authority for Federal and state governments to respond directly to hazardous substance incidents. The act requires reporting of spills, including radioactive spills, to the National Response Center.

Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. 5121)—This act, as amended, provides an orderly and continuing means of assistance by the Federal Government to state and local governments in managing their responsibilities to alleviate suffering and damage resulting from disasters. The President, in response to a state Governor's request, may declare an "emergency" or "major disaster" to provide Federal assistance under this act. The President, in Executive Order 12148, delegated all functions, except those in Sections 301, 401, and 409, to the Director of the Federal Emergency Management Agency. The act provides for the appointment of a Federal coordinating officer who will operate in the designated area with a state coordinating officer for the purpose of coordinating state and local disaster assistance efforts with those of the Federal Government.

Justice Assistance Act of 1984 (42 U.S.C. 3701-3799)—This act establishes the Emergency Federal Law Enforcement Assistance, which provides assistance to state and local governments in responding to a law enforcement emergency. The act defines the term "law enforcement emergency" as an uncommon situation which requires law enforcement, which is or threatens to become of serious or epidemic proportions, and with respect to which state and local resources are inadequate to protect the lives and property of citizens or to enforce the criminal law. Emergencies that are not of an ongoing or chronic nature (for example, the Mount Saint Helens volcanic eruption) are eligible for Federal law enforcement assistance. This assistance includes funds, equipment, training, intelligence information, and personnel.

Price-Anderson Act (42 U.S.C. 2210)—This act allows DOE to indemnify its contractors if the contract involves the risk of public liability from a nuclear incident.

5.3.2 Emergency Management and Response Federal Regulations

Quantities of Radioactive Materials Requiring Consideration of the Need for an Emergency Plan for Responding to a Release (10 CFR Section 30.72, Schedule C)—This section of the regulations provides a list which is the basis for both the public and private sector to determine if the radiological materials they handle must have an emergency response plan for unscheduled releases, and is one of the threshold criteria documents for DOE hazards assessments required by DOE Order 5500.3A, "Planning and Preparedness for Operational Emergencies." The "Federal Radiological Emergency Response Plan," dated November 1995, primarily discusses offsite Federal response in support of state and local governments with jurisdiction during a peacetime radiological emergency.

Commercial Nuclear Power Plant Emergency Preparedness Planning (44 CFR Part 352)—These regulations generally establish the policies, procedures, and responsibilities of the Federal Emergency Management Agency, NRC, and DOE as guidance for implementing a federal emergency preparedness program.

Occupational Safety and Health Administration Emergency Response, Hazardous Waste Operations, and Worker Right to Know (29 CFR Part 1910)—This regulation establishes OSHA requirements for employee safety in a variety of working environments. It addresses employee emergency and fire prevention plans (Section 1910.38), hazardous waste operations and emergency response (Section 1920.120), and hazards communication (Section 1910.1200) that enable employees to be aware of the dangers they face from hazardous materials at their workplace. These regulations do not directly apply to Federal agencies. However, Section 19 of the Occupational Safety and Health Act (29 U.S.C. 668) requires all Federal agencies to have occupational safety programs "consistent" with Occupational Safety and Health Act standards.

Emergency Management and Assistance (44 CFR Section 1.1)—This regulation contains the policies and procedures for the Federal Emergency Management Act, National Flood Insurance Program, Federal Crime Insurance Program, Fire Prevention and Control Program, Disaster Assistance Program, and Preparedness Program, including radiological planning and preparedness.

Hazardous Materials Tables and Communications, Emergency Response Information Requirements (49 CFR Part 172)—This regulation defines the regulatory requirements for marking, labeling, placarding, and documenting hazardous material shipments. The regulation also specifies the requirements for providing hazardous material information and training.

5.3.3 Emergency Response and Management Executive Orders

Executive Order 12148 (Federal Emergency Management, July 20, 1979)—This order transfers functions and responsibilities associated with Federal emergency management to the Director of the Federal Emergency Management Agency. The order assigns the Director the responsibility to establish Federal policies for, and to coordinate all civil defense and civil emergency planning, management, mitigation, and assistance functions of, Executive agencies.

Executive Order 12656 (Assignment of Emergency Preparedness Responsibilities, November 1988)—This order assigns emergency preparedness responsibilities to Federal departments and agencies.

5.4 CONSULTATIONS WITH FEDERAL, STATE, AND LOCAL AGENCIES AND FEDERALLY RECOGNIZED NATIVE AMERICAN GROUPS

Certain laws, such as the Endangered Species Act, the Fish and Wildlife Coordination Act, and the National Historic Preservation Act, require consultation and coordination by DOE with other governmental entities including other Federal agencies, state and local agencies, and federally recognized Native American groups. These consultations must occur on a timely basis and are generally required before any land disturbance can begin. Most of these consultations are related to biotic resources, cultural resources, and Native American rights.

The biotic resource consultations generally pertain to the potential for activities to disturb sensitive species or habitats. Cultural resource consultations relate to the potential for disruption of important cultural resources and archaeological sites. Native American consultations are concerned with the potential for disturbance of ancestral Native American sites and the traditional practices of Native Americans.

DOE initiated the required consultations with the appropriate State Historic Preservation Officers, as required by NEPA and Section 106 of the National Historic Preservation Act; the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, as required by the Endangered Species Act of 1973, the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act; and the appropriate state regulators, as required by state laws or regulations. DOE also initiated the required consultations with the appropriate Native American tribal governments, as required by the Executive Memorandum (dated April 29, 1994) entitled "Government-to-Government Relations with Native American Tribal Governments" and DOE Order 1230.2, "American Indian Tribal Government." A list of those organizations contacted is included in **Table 5–3**. No major issues were identified as a result of the consultation process. The specific results of the consultation process are presented in Chapter 4.

Table 5–3 Organizations Contacted During the Consultation Process

DOE Site	Subject	Addressed To (Date of Letter)
ORR	Ecological resources	Mr. James Widlak U.S. Fish and Wildlife Service (July 10, 2000)
	Ecological resources	Mr. Reginald G. Reeves Tennessee Department of Environment and Conservation (July 10, 2000)
	Cultural resources	Mr. Ollie Keller State Historic Preservation Officer (July 10, 2000)
INEEL	Ecological resources	Mr. Mike Donahoo U.S. Fish and Wildlife Service (July 10, 2000)
	Ecological resources	Mr. George Stephens Idaho Department of Fish and Game (July 10, 2000)
	Cultural resources	Dr. Robert M. Yohe State Historic Preservation Officer (July 10, 2000)
	Native American	The Honorable Lionel Boyer Shoshone-Bannock Tribes (July 10, 2000)
	Native American	Ms. Diana Yupe Shoshone-Bannock Tribes (July 10, 2000)
Hanford	Ecological resources	Mr. James Michaels U.S. Fish and Wildflife Service (July 10, 2000)
	Ecological resources	Mr. Steve Landino National Marine Fisheries Service (July 10, 2000)
	Ecological resources	Ms. Sandy Swope Moody Washington Department of Natural Resources (July 10, 2000)
	Ecological resources	Ms. Lori Guggenmos Washington Department of Wildlife (July 10, 2000)
	Cultural resources	Dr. Allyson Brooks State Historic Preservation Officer (July 10, 2000)
	Native American	Ms. Lenora Seelatsee Wanapum Band (July 10, 2000)
	Native American	Mr. Russell Jim Yakama Nation (July 10, 2000)
	Native American	The Honorable William Burke Confederated Tribes of the Umatilla Indian Reservation (July 10, 2000)
	Native American	Mr. Patrick Sobotta Nez Perce Tribe (July 10, 2000)